

WHAT IS CLAIMED IS:

1. An isolated nucleic acid molecule which comprises DNA having at least 80% sequence identity to (a) a DNA molecule encoding a PRO19598 polypeptide comprising the sequence of amino acid residues from 1 or 21 to about 262 of Figure 2 (SEQ ID NO:2), or the complement of the DNA molecule of (a).

5 2. The isolated nucleic acid molecule of Claim 1 comprising the sequence of nucleotides from 241 or 301 to about 1026 of Figure 1 (SEQ ID NO:1).

10 3. The isolated nucleic acid molecule of Claim 1 comprising the nucleotide sequence of Figure 1 (SEQ ID NO:1).

15 4. The isolated nucleic acid molecule of Claim 1 comprising a nucleotide sequence that encodes the sequence of amino acid residues from 1 to 21 to about 262 of Figure 2 (SEQ ID NO:2).

20 5. An isolated nucleic acid molecule comprising DNA which comprises at least 80% sequence identity to (a) a DNA molecule encoding the same mature polypeptide encoded by the human protein cDNA deposited with the ATCC on March 21, 2000 under ATCC Deposit No. PTA-1532 (DNA145887-2849), or (b) the complement of the DNA molecule of (a).

25 6. The isolated nucleic acid molecule of Claim 5 comprising DNA encoding the same mature polypeptide encoded by the human protein cDNA deposited with the ATCC on March 21, 2000 under ATCC Deposit No. PTA-1532 (DNA145887-2849).

30 7. An isolated nucleic acid molecule comprising DNA which comprises at least 80% sequence identity to (a) the full-length polypeptide coding sequence of the human protein cDNA deposited with the ATCC on March 21, 2000 under ATCC Deposit No. PTA-1532 (DNA145887-2849), or (b) the complement of the DNA molecule of (a).

35 8. The isolated nucleic acid molecule of Claim 7 comprising the full-length polypeptide coding sequence of the human protein cDNA deposited with the ATCC on March 21, 2000 under ATCC Deposit No. PTA-1532 (DNA145887-2849).

9. An isolated nucleic acid molecule encoding a PRO19598 polypeptide comprising DNA that hybridizes to the complement of the nucleic acid sequence that encodes amino acids 1 or 21 to about 262 of Figure 2 9SEQ ID NO:2).

35 10. The isolated nucleic acid molecule of Claim 9, wherein the nucleic acid that encodes amino acids 1 or 21 to about 262 of Figure 2 9SEQ ID NO:2) comprises nucleotides 241 or 301 to about 1026 of Figure 1

(SEQ ID NO:1).

11. The isolated nucleic acid molecule of Claim 9, wherein the hybridization occurs under stringent hybridization and wash conditions.

5 12. An isolated nucleic acid molecule comprising about 406 nucleotides and which is produced by hybridizing a test DNA molecule under stringent hybridization conditions with (a) a DNA molecule which encodes a PRO19598 polypeptide comprising a sequence of amino acid residues from 1 to 21 to about 262 of Figure 2 (SEQ ID NO:2), or (b) the complement of the DNA molecule of (a), and isolating the test DNA molecule.

10 13. The isolated nucleic acid molecule of Claim 12, which has at least about 80% sequence identity to (a) or (b).

14. A vector comprising the nucleic acid molecule of any one of Claims 1 to 13.

15 15. A host cell comprising the vector of Claim 14.

16. The host cell of Claim 15, wherein said cell is a CHO cell, an *E. coli*, a yeast cell of a Baculovirus-infected insect cell.

20 17. A process for producing a PRO19598 polypeptide comprising culturing the host cell of Claim 15 under conditions suitable for expression of said PRO19598 polypeptide and recovering said PRO19598 polypeptide from the cell culture.

25 18. An isolated PRO19598 polypeptide comprising an amino acid sequence comprising at least 80% sequence identity to the sequence of amino acid residues from 1 to 21 to about 262 of Figure 2 (SEQ ID NO:2).

19. The isolated PRO19598 polypeptide of Claim 18 comprising amino acid residues 1 to 21 to about 262 of Figure 2 (SEQ ID NO:2).

30 20. An isolated PRO19598 polypeptide having at least 80% sequence identity to the polypeptide encoded by the cDNA insert of the vector deposited with the ATCC on March 21, 2000 as ATCC Deposit No. PTA-1532 (DNA145887-2849).

35 21. An isolated PRO19598 polypeptide comprising the sequence of amino acid residues from 1 to 21 to about 262 of Figure 2 (SEQ ID NO:2), or a fragment thereof sufficient to provide a binding site for an anti-PRO19598 antibody.

thereby linking said bioactive molecules to said cell.

45. The method according to Claim 44, wherein said bioactive molecule is a toxin, a radiolabel or an antibody.

5 46. The method according to Claim 44, wherein said bioactive molecule causes the death of said cell.

10 47. A method of modulating at least one biological activity of a cell expressing a polypeptide designated as PRO3301, said method comprising contacting said cell with a PRO19598 polypeptide or an anti-PRO3301 antibody, whereby said PRO19598 polypeptide or anti-PRO3301 antibody binds to said PRO3301 polypeptide, thereby modulating at least one biological activity of said cell.

48. The method according to Claim 47, wherein said cell is killed.

15 49. A method of modulating at least one biological activity of a cell expressing a polypeptide designated as PRO19598, said method comprising contacting said cell with a PRO3301 polypeptide or an anti-PRO19598 antibody, whereby said PRO3301 polypeptide or anti-PRO19598 antibody binds to said PRO19598 polypeptide, thereby modulating at least one biological activity of said cell.

20 50. The method according to Claim 49, wherein said cell is killed.

25 51. A method for detecting the presence of tumor in an mammal, said method comprising comparing the level of expression of a PRO3301 polypeptide in (a) a test sample of cells taken from said mammal and (b) a control sample of normal cells of the same cell type, wherein a higher level of expression of said PRO3301 polypeptide in the test sample as compared to the control sample is indicative of the presence of tumor in said mammal.

52. The method of Claim 51, wherein said tumor is lung tumor, colon tumor, breast tumor, or rectal tumor.

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22. An isolated polypeptide produced by (i) hybridizing a test DNA molecule under stringent conditions with (a) a DNA molecule encoding a PRO19598 polypeptide comprising the sequence of amino acid residues from 1 to 21 to about 262 of Figure 2 (SEQ ID NO:2), or (b) the complement of the DNA molecule of (a), (ii) culturing a host cell comprising said test DNA molecule under conditions suitable for the expression of said polypeptide, and (iii) recovering said polypeptide from the cell culture.

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23. The isolated polypeptide of Claim 22, wherein said test DNA molecule has at least 80% sequence identity to (a) or (b).

10 24. A chimeric molecule comprising a PRO19598 polypeptide fused to a heterologous amino acid sequence.

25. The chimeric molecule of Claim 24, wherein said heterologous amino acid sequence is an epitope tag sequence.

15 26. The chimeric molecule of Claim 24, wherein said heterologous amino acid sequence is a Fc region of an immunoglobulin.

27. An antibody which specifically binds to a PRO19598 polypeptide.

20 28. The antibody of Claim 27, wherein said antibody is a monoclonal antibody, a humanized antibody or a single-chain antibody.

29. An agonist to a PRO19598 polypeptide.

25 30. An antagonist to a PRO19598 polypeptide.

31. A composition of matter comprising a (a) a PRO19598 polypeptide, (b) an agonist to a PRO19598 polypeptide, (c) an antagonist to a PRO19598 polypeptide, or (d) an anti-PRO19598 antibody in admixture with a pharmaceutically acceptable carrier.

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32. An oligonucleotide probe derived from any of the nucleotide sequences shown in the accompanying figures.

35 33. A method of detecting a polypeptide designated as PRO3301 in a sample suspected of containing a PRO3301 polypeptide, said method comprising contacting said sample with a polypeptide designated herein as PRO19598 and determining the formation of a PRO3301/PRO19598 polypeptide conjugate in said sample, wherein the formation of said conjugate is indicative of the presence of a PRO3301 polypeptide in said sample.

34. The method according to Claim 33, wherein said sample comprises cells suspected of expressing said PRO3301 polypeptide.

35. The method according to Claim 33, wherein said PRO19598 polypeptide is labeled with a detectable label.

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36. The method according to Claim 33, wherein said PRO19598 polypeptide is attached to a solid support.

37. A method of detecting a polypeptide designated as PRO19598 in a sample suspected of containing a PRO19598 polypeptide, said method comprising contacting said sample with a polypeptide designated herein as PRO3301 and determining the formation of a PRO3301/PRO19598 polypeptide conjugate in said sample, wherein the formation of said conjugate is indicative of the presence of a PRO19598 polypeptide in said sample.

15 38. The method according to Claim 37, wherein said sample comprises cells suspected of expressing said PRO19598 polypeptide.

39. The method according to Claim 37, wherein said PRO3301 polypeptide is labeled with a detectable label.

20 40. The method according to Claim 37, wherein said PRO3301 polypeptide is attached to a solid support.

25 41. A method of linking a bioactive molecule to a cell expressing a polypeptide designated as PRO3301, said method comprising contacting said cell with a polypeptide designated as PRO19598 that is bound to said bioactive molecule and allowing said PRO3301 and said PRO19598 polypeptides to bind to one another, thereby linking said bioactive molecules to said cell.

30 42. The method according to Claim 41, wherein said bioactive molecule is a toxin, a radiolabel or an antibody.

43. The method according to Claim 41, wherein said bioactive molecule causes the death of said cell.

35 44. A method of linking a bioactive molecule to a cell expressing a polypeptide designated as PRO19598, said method comprising contacting said cell with a polypeptide designated as PRO3301 that is bound to said bioactive molecule and allowing said PRO3301 and said PRO19598 polypeptides to bind to one another,